MARINE, COASTAL, AND ESTUARINE RESTORATION PROJECTS BY FEDERAL AGENCIES

Natural resource, damage assessment and restoration (NRDAR) work is conducted in federally managed areas and for federally managed resources (e.g., species such as fish or birds that are not confined to a particular area) throughout the United States and its territories. This map illustrates locations of restoration projects implemented by various National Oceanic and Atmospheric Administration (NOAA)¹ and Department of the Interior (DOI)² agencies. Additional project information is also provided.³ These projects are implemented under each agency's NRDAR program and typically address injuries from oil spills, hazardous substance releases, and vessel groundings. Point Reyes and Montere lag Island - a nesting area for eiders and other migratory birds - in Casco Bay, #62 - Temporary pond at borrow pit Banos Poaching Dry Tortugas National Dry Tortugas National Park Everglades National Park, PSRPA 24 Blonder Grounding Everglades National Park #12 - Transplanted/restored shoreline vegetation in foreground, breach site in background. Biscayne National Park (seagrass) 2000 25 Cury / St. Tropez Biscayne National Park, FL PSRPA Grounding Biscayne National Park, FL PSRPA Biscavne National Park (reef) 2004 26 Debbet Grounding #6 - Decoy seabirds (murres), mirrors, and Biscayne National Park, FL PSRPA 27 Elortequi / Almanac Biscayne National Park (seagrass) a solar-powered murre-call sound system Grounding were deployed to attract these birds back 28 Florida Mystery Spill offshore Broward County, fisheries, migratory birds, T&E to Devil's Slide Rock, once nearly covered species, recreational use with 3,000 breeding murres. Everglades National Park, PSRPA 29 Fulkreth / Lady B Everglades National Park Grounding Everglades National Park, PSRPA 30 Fulton / SeaHunt Everglades National Park #62 - Wetland habitat created as pond area fills in with cattails and other vegetation. #78 - Restoring a bay scallop fishery at 31 Gateway Marine / Big Roy Biscayne National Park, FL PSRPA Biscayne National Park (seagrass) Pt. Judith Salt Pond. 32 Hollander / Pillow Talk Biscayne National Park, FL PSRPA none Biscayne National Park (seagrass) 2004 33 Igloo Moon Grounding Biscayne National Park, FL PSRPA Biscayne National Park (coral reef) 2000 34 | Liebowitz / Free Wiley II | Everglades National Park, | PSRPA Everglades National Park 35 Padron / Zarife Grounding Biscayne National Park, FL PSRPA none Biscayne National Park (seagrass) Volunteers restoring tidal shoreline habitat by transplanting Spartina -36 Perdido Key Coal Spill Gulf Islands National Seashore off of Perdido Key, Gulf slands National Seashore, (benthic habitat) a common restoration activity along the U.S. Atlantic and Gulf San Diego #6 - Live nesting pairs of murres are re-37 Porter / C'est la vie Biscayne National Park, FL PSRPA Biscayne National Park (seagrass) 2000 coasts (file photo). establishing on Devil's Slide Rock at double the rate hoped for by project 38 Pure Pleasure Grounding Biscayne National Park, FL PSRPA Biscayne National Park (seagrass) 2000 managers, with 190 pairs after nine years. Biscayne National Park, FL PSRPA Biscayne National Park (seagrass) Grounding 40 She's a Lady Grounding Biscayne National Park, FL PSRPA none Biscayne National Park (seagrass) 2000 Biscayne National Park (seagrass) 41 Sobel / Lady P Grounding Biscayne National Park, FL PSRPA 2000 42 Stivers / Great White Everglades National Park, PSRPA Everglades National Park Photo Credit: Texas NRDAR Trustee Cou Tampa Bay, FL fisheries, migratory birds, T&E 43 Tampa Bay Oil Spill #95 - New vegetation plugs in terraces. species, recreational use Photo Credit: Texas NRDAR Trustee Co Biscayne National Park, FL PSRPA Biscayne National Park (seagrass) 2000 #95 - Restoring estuarine wetlands at Bessie 45 Tuttle / Stiltsville Biscayne National Park, FL PSRPA Biscayne National Park (seagrass) Heights Marsh - terrace construction. Grounding #35 - Aerial photo of seagrass habitat highly offshore Barber's Point, OPA 46 Tesoro Hawaii Oil Spill fisheries, migratory birds, impacted by propeller scars at Biscayne near Honolulu, HI recreational use National Park. #7 - A Habitat Stewardship Program was 47 Waiau / Chevron Pipeline Pearl Harbor, HI OPA, PSRPA fisheries, recreational use, USS funded to monitor and maintain an unrelated Arizona Memorial restoration site, (Crissy Field Marsh, fisheries, migratory birds, Indiana 48 Grand Calumet River / Grand Calumet River and CERCLA San Francisco Bay). Volunteers are shown Indiana Harbor Indiana Harbor, near Gary. Dunes National Lakeshore re-planting certain areas at this site. The same of the sa 49 Clooney Island EDC Spill Lake Charles (Calcasieu CERCLA fisheries, migratory birds Estuary), Westlake, LA Dixon Bav. LA State fisheries, migratory birds none fisheries, Sabine NWR 51 Dynergy Pipeline Rupture Cameron Parish, LA 52 Formosa Six Spill Southwest Pass, Gulf of CERCLA State fisheries 53 Four Bayou Pass Oil Spill Barataria Bay, LA 1993 Lake Barre, Timbalier Bay, #7 - Water quality monitoring at Crissy Field Marsh. 56 Westchester Oil Spill Mississippi River, 2003 fisheries, migratory birds #38 - Restoring propeller scars in seagrass downstream of New recreational use Sediment-filled burlap bags are first taken to the site as fill. #93 - Preservation of barrier island land 57 Julie N Oil Spill Fore River, Portland, ME #21 - Assessing damage to a coral reef head. important nesting habitat for migratory birds -2002 58 Chalk Point Oil Spill Patuxent River, Aquasco, on Mustang Island. 59 | Charles-George Landfill Tyngsborough, MA fisheries, migratory birds New Bedford Harbor #84 - Restoration of Pierce Marsh. Boston, MA fisheries, migratory birds 2004 61 Posavina Oil Spil State, Tribe fisheries, migratory birds, T&E Saginaw River & Bay, MI Saginaw Bay 63 Coakley Landfill Greenland and North migratory birds Hampton, NH #7 - Quarterly sampling to monitor the recovery 64 *Cynthia M* Spill Hackensack River, South of aquatic life at Crissy Field Marsh. Kearny, NJ 65 Jahre Spray Spill Delaware River, NJ 1996 CERCLA-driven° 66 Kentucky Mobil Termi Paulsboro, NJ State(s?) fisheries Transplanted seagrass plugs in a damaged area 1997 Freehold Township, NJ 67 | Lone Pine Landfil migratory birds 1994 68 | Santa Clara Spill offshore Cape May, NJ OPA-driven⁶ 69 B.T. Nautilus Oil Spill Kill van Kull Waterway States, Other | fisheries, migratory birds, T&E between NJ and NY species, recreational use Puerto Rico PSRPA-driven° 70 Cibro Savannah Oil Spill Arthur Kill Waterway fisheries, recreational use U.S Virgin Islands Co-authored by: between NY and N Steve Glomb - Department of the Interior, Washington, D.C. 71 Exxon Bayway Oil Spill Arthur Kill Waterway, States, Other | fisheries, migratory birds, pre-OPA⁹ between NY and NJ Photo Credit: Texas NRDAR Trustee Dolores A. Savignano - U.S. Fish and Wildlife Service, Arlington, VA 72 AES/Shore Realty Glenwood Landing, Long CERCLA State fisheries, migratory birds #84 - Wetland restoration at San Jacinto State Park Jeff Shenot - NOAA - National Marine Fisheries Service, Silver Spring, MD Island Sound, NY 2004 Farmingdale, NY 73 Liberty Industrial Mark VanMouwerik - National Park Service, Fort Collins, CO Caribbean Sea fisheries, migratory birds 74 Fields Brook Cartographic Production by: Coos Bay, OR State, Tribes | migratory birds, recreational use 75 New Carissa Oil Spill OPA, PSRPA Other (territory) migratory birds, recreational use, Danelle Malget - National Park Service, Colorado State University 76 Morris J. Berman Oil Spill Point Escambron, near Miles San Juan, Puerto Rico San Juan National Historic Site 0 100 200 Fort Collins, CO 77 Fortuna Reefer Grounding Mona Island, Puerto Rico 78 North Cape Oil Spill Moonstone Beach, RI fisheries, migratory birds, T&E ¹ More specifically, the National Marine Fisheries Service and the National Ocean Service. species, Trustom Pond NWR Cumberland and Lincoln, 79 Peterson-Puritan ² Includes DOI's five land management agencies -- Bureau of Indian Affairs, Bureau of Land Management (BLM), Bureau of Reclamation (BR), National Park Service, and U.S. Fish and Wildlife Service. Most projects on tribal 80 Rose Hill Landfill South Kingstown, RI CERCLA 2003 lands are not depicted on this map because they are under Tribal, not Federal (DOI or NOAA) jurisdiction. World Prodigy Oil Spill Narragansett Bay fisheries, migratory birds, T&E species, Trustom Pond NWR ³ Information on this poster is not necessarily complete or free of mistakes and should not be used for legal purposes Charleston County, SC 2003 migratory birds, Anahuac NWR ⁴ This is a commonly used name. Names may vary among the agencies or parties involved. Hawaiian Islands 84 Apex Galveston Oil Spill Galveston Bay, TX fisheries, migratory birds 85 Bailey Waste Bridge City, TX fisheries, migratory birds ⁵ Location is where the original incident occurred. Restoration projects are not always at the exact same location as San Patricio County, TX 86 Chiltipin Creek Oil Spill fisheries, migratory birds the incident, but typically are in the same general area. Note, however, that some innovative 87 San Jacinto River Pipeline Galveston Bay and area, fisheries, migratory birds Fairbanks restoration projects are being implemented inland. For example, trustees at two coastal oil spill sites have #1 - The Exxon Valdez oil spill settlement has determined that the preferred restoration options for injured migratory birds at those sites is the restoration and/or funded dozens of research, monitoring, habitat Crosby, TX 88 French Limited fisheries, migratory birds #47 - Original shoreline rip-rap in front of protection of nesting habitat at distant inland locations. Also note that there are inland incident sites where injury protection, and restoration projects. USS Arizona Memorial visitor center. 89 Mobil Mining Pasadena, TX CERCLA to migrating marine, coastal, or estuarine resources such as anadromous fish and migratory birds have occurred. 90 Motco LaMarque, TX CERCLA fisheries, migratory birds Neither the inland restoration project sites nor the inland incident sites are depicted on this poster. 91 Phillips Petroleum Oil Spill Sweeny, TX fisheries, migratory birds CERCLA 92 Sheridan Disposal Site Hampstead, TX fisheries, migratory birds ⁶ The three main statutes under which federal NRDAR work is done are the Oil Pollution Act (OPA), the 93 Skaubay/Berge Banker Oil from Matagorda to Kenedy OPA, PSRPA fisheries, migratory birds, Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), and the Park System recreational use, Padre Island National Seashore, Matagorda Resource Protection Act (PSRPA). Island NWR Texas City, TX 94 Tex-Tin fisheries, migratory birds 2000 ⁷ For simplicity, resources were categorized as fisheries, migratory birds, threatened and endangered (T&E) Neches River, Jefferson & 95 Unocal Pipeline fisheries, migratory birds species, and marine mammals. So, for instance, if estuarine wetlands and marine kelp beds were the potentially Orange Counties, TX affected resources at a site, they would be listed in this table as "migratory birds" and "fisheries," respectively. 96 Barge Nestucca Oil Spill Grays Harbor, WA fisheries, migratory birds, T&E Since NPS does not manage specifically for these four resources, the potentially affected resource (e.g. seagrass) species, Olympic National Marine was put in parentheneses after the National Park unit name. Sanctuary, Olympic National Park, Copalis NWR, Dungeness NWR, Flattery Rocks NWR, Protection ⁸ Year when settlement for restoration costs occurred. This could be several years after the incident occurred and/or Island NWR, Quillayute Needles Alaska several years before actual restoration work begins. Tacoma, WA CERCLA State, Tribes fisheries, migratory birds, T&E 97 Commencement Bay ⁹ This incident precipitated the passage of OPA. CERCLA State, Tribes fisheries, migratory birds, T&E 98 | Elliott Bay / Duwamish King County, WA ¹⁰ Technically, recreational use is not a resource, but rather a service provided by resources. 99 | Tenyo Maru Oil Spill offshore Cape Flattery, WA State, Tribe fisheries, migratory birds, T&E 100 Texaco Anacortes State, Tribes | fisheries, migratory birds, T&E Anacortes, WA 8 September 2004 American Samoa Pacific Ocean State, Tribe | fisheries, migratory birds, T&E 101 | Tulalip Landfill Marysville, WA National Oceanic and Atmospheric Administration, National Park Service, U.S. Geological Survey, U.S. Fish and Wildlife Service and Environmental Systems Research Institute 102 Western Processing Kent, WA CERCLA State, Tribes fisheries, migratory birds, Lower Fox River, Green 103 Fox River - Green Bay

recreational use